From: Jory Fleming <joryfleming@gmail.com>
Sent: Thursday, November 18, 2021 10:11 PM
To: WEC_CFFF_EIS Resource
Subject: [External_Sender] public comment
Attachments: Feds to look more carefully at nuclear fuel factory after violations The State.pdf; NRC Letter.pdf; Westinghouse SC nuclear fuel plant leaks uranium into ground The State.pdf; Leaks at SC nuclear plant brings feds to worried community The State.pdf; Westinghouse factory in Columbia tied to nuclear defense effort The State.pdf; Feds Congaree National Park threatened by nuclear fuel plant The State.pdf

Dear Nuclear Regulatory Commission,

I have attached my public comment to this email. Please let me know if I need to do anything else to complete my public comment.

Thanks,
Jory

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Files	**Size**	**Date & Time**	
MESSAGE	618	11/18/2021 10:12:15 PM	
Feds to look more carefully at nuclear fuel factory after violations The State.pdf			67719
NRC Letter.pdf	117691		
Westinghouse SC nuclear fuel plant leaks uranium into ground The State.pdf			79122
Leaks at SC nuclear plant brings feds to worried community The State.pdf			827719
Westinghouse factory in Columbia tied to nuclear defense effort The State.pdf			
1972679			
Feds Congaree National Park threatened by nuclear fuel plant The State.pdf			
5410600			

Options
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Nuclear-safety concerns linger at Westinghouse plant

Photo courtesy of High Flyer

Westinghouse atomic fuel plant southeast of Columbia, SC.
Westinghouse atomic fuel plant southeast of Columbia, SC.

The U.S. Nuclear Regulatory Commission will increase scrutiny of a Columbia atomic fuel factory after nearly a year of concerns about safety and the buildup of uranium at the 48-year-old plant.

Since finding an accumulation of uranium in an air pollution control device last summer, the NRC has cited one additional violation related to the same piece of equipment in the Westinghouse nuclear fuel plant off Bluff Road, federal records show.

In the most recent case, the company potentially allowed uranium to build up for 23 hours late in 2016 in the pollution control device. Westinghouse did not properly restart nozzles on the device, known as a scrubber, that keep processed water flowing, a Jan. 27 NRC violation notice says.

That finding, to be discussed Tuesday night at a meeting in Columbia, follows the discovery months earlier that enough uranium had built up in the scrubber to have caused a small burst of radiation. No explosion occurred, but the issue was significant enough for Westinghouse to shut down part of the plant for several months while it worked to make improvements. The closed portion of the plant has since been restarted.

As a result of problems at the plant, the NRC says it will conduct comprehensive performance reviews annually instead of every two years.

Roger Hannah, a spokesman for the NRC, said his agency is satisfied the plant is safe, but he said the department is still assessing whether to fine Westinghouse over the nuclear safety violations. “They have addressed all the immediate issues,” Hannah said. “What we are looking at is the enforcement aspect.”

A Westinghouse spokeswoman declined comment Monday, but company officials have previously said they are committed to nuclear safety. The company brought in a new vice president last year to oversee improvements at the plant.

Tom Clements, who heads the Savannah River Site Watch environmental group, said he’s concerned about the Westinghouse plant “because the problems are ongoing.”

Tuesday’s NRC meeting is at the State Museum on Gervais Street at 6 p.m.

The Westinghouse fuel plant, built in 1969, employs about 1,000 people. The 555,000-square-foot plant makes nuclear fuel for use in commercial atomic power plants. It is located in a mostly wooded area between Interstate 77 and Congaree National Park along the Congaree River.

The plant is owned by Westinghouse Corp., which recently filed for bankruptcy. The company, the chief contractor on an atomic reactor construction project in Fairfield County, has not indicated what will ultimately happen to the fuel plant in Richland County. But an official with SCE&G, the utility building the Fairfield plants, said recently the Bluff Road factory could be sold to raise revenue.

This story was originally published May 8, 2017 6:13 PM.

Dear Nuclear Regulatory Commission,

I am writing this letter to provide my input as a member of the public and resident of Columbia, SC to the notice "Westinghouse Electric Company, LLC; Columbia Fuel Fabrication Facility" as noted by the NRC in the Federal Register. This draft EIS affects members of my community and areas that I am grateful to use and benefit from, such as the Congaree River and Congaree National Park. I hope this letter is helpful for relaying my concerns in several areas. I have tried to group my comments to help convey them better. I hope that you consider these comments and that they are constructive in your deliberation.

1) Difficulty of Public Comment

As a longtime resident of the area, I have seen several articles about the facility in local newspaper articles (see attached to this letter), and so this opportunity to provide public comment is important to me. However, the first information I noticed about this process was in an article in The State published November 5th. This was after the initial public comment period had closed. While I am grateful that I can submit this later due to the extension of the public comment period, I am concerned that the window for public comments to be submitted is so short. I try to participate and provide input when asked on issues that affect me, such as the SC Public Service Commission and the City of Columbia 15-year plan. The PSC typically sends me an individual letter so that I am made aware of the request for my comments, while the city planning process has occurred over several years with several in-person or virtual meetings, surveys, etc. Being made individually aware and having enough time to comment have both greatly helped my ability to provide input, but I do not feel either was the case for this input process to the NRC.

2) Inability to Access Quantitative Information

I was also confused that the NRC has elected to withhold crucial information in the draft EIS that has prevented me from feeling like I can comment effectively. When I began to read through the draft EIS, I was looking for specific, quantitative information on the proposed costs and benefits and thus read through section 3.18. There is not a single number in the text of section 3.18 concerning costs except for 3 numbers in Table 3-28, all of which are not environmental costs. I was surprised to learn that the content relevant to knowing the size, types, quantity, and other specific information about environmental costs is all in Appendix C. The fact that this quantitative information is fully laid out in Appendix C is helpfully mentioned 5 times in section 3.18. Appendix C is completely hidden from public review (see page C-1). I was very upset that I could not view any information on the size, types, quantity, or any other specific information on environmental costs because they are all in Appendix C. As just one example, section 3.18 says that "The proposed action poses the least disruptive alternative from the cost-benefit perspective" (line 3, page 3-129), but I cannot see numeric information of any of the costs. What if I disagree with the analysis or assumptions made in the economic analysis? What if I am concerned by some of the specific costs? How many costs are there? What is the number representing the costs' size, length of time over which they occur, etc.? What if the discount rate selected didn't value the future as much as I do?

I called the NRC staff contact to ask if I could view information on environmental costs and was told no. I then asked why the NRC had made the decision to withhold this information from public view, and was surprised to learn that the company had made the decision to withhold the information by submitting an affidavit saying that any information they selected was proprietary information. When I asked if the NRC challenged, reviewed, or in any way judged whether this request was reasonable, I was told no. When I asked if anyone else could challenge this interpretation and ask for information to be available to the public, I was told no. As I write this letter, it still astounds me that I cannot view environmental costs in an environmental impact statement, because the company creating the cost has decided it is in their self-interest to prevent me from viewing it. I feel that this decision made by the NRC very clearly indicates my public comment has little value when weighed against a letter from the company.

3) License Times for Review Are Too Long

I find the license options the NRC has selected for the draft EIS of 20 years and 40 years to both be too long. With the 40-year option, I would be nearly 70 years old (I am currently 27) before I could have another opportunity to provide input for this facility. I find that completely unacceptable. I feel that if this option is selected, I will not likely contribute again in my old age because my input is clearly of little value. Further, 20 years is longer than other local documents that I can contribute to and are meant to be commented on regularly by the public. For example, I mentioned that I participated in Columbia's public input process to their new 15-year plan. They will have another plan in due time (e.g. 15 years from now), and before that 15-year window they will begin a new cycle of public input several years in advance. I am thus asked to contribute to the city's direction approximately every 10-15 years and can elect to do so more frequently if I contact local officials. I do not understand why the NRC has elected to choose licensing options that are far longer than other important local documents where public input matters and is considered crucial like this example I mentioned.

4) Environmental Impacts are not Treated Seriously

A key reason that I am writing this letter is my concern for the environment, particularly groundwater and the local river, based in part on my knowledge of the facility in the local community (see attached articles from The State for background). It is my understanding that prior documents found no significant impact and this draft EIS is a revision of those earlier incorrect findings, but in this draft most impacts are now just listed as "SMALL" and I have serious concerns that these are not what I would consider to be small. These impacts and their costs are difficult to evaluate without numerical information as I noted in my earlier comment. I value water resources highly and over a long time-horizon because I live here and consider potential impacts to public health that could occur or develop over a long time period to be concerning. I would like to note one example that I thought is emblematic of how environmental concerns are not being treated seriously from section 2.2.2 and the NRC overview video. I noticed that minimum sampling frequency is often collected very sporadically for everything other than air pollution monitoring, with many only sampled annually (Table 2-4). On page 2-20, I noticed that a single fish per year is analyzed for uranium and Tc-99. This

sampling is mentioned again in section 3.5.2.2, but I did not find in the report a justification for this sampling frequency and quantity. I would consider this sampling plan for fish to be inadequate. I was curious and looked up some information on how other federal agencies treat sampling of fish and noted this document I found linked from NOAA Fisheries Seafood Inspection webpage (CFR Title 50 – Part 260 https://www.govinfo.gov/content/pkg/CFR-2009-title50-vol7/pdf/CFR-2009-title50-vol7-part260.pdf), where on pages 842-846 I see that a typical sample size is far greater than 1 fish.

5) Environmental Justice Impacts Methodology is Unexplained

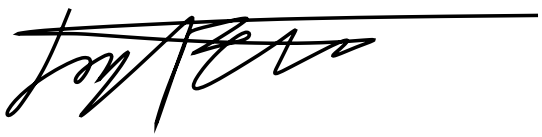
In section 3.16.3, the draft EIS states that "Further, the staff could not establish pathways linking these impacts on the local population." The draft EIS does not define or describe what steps the staff took to attempt to "establish pathways". The report then proceeds to an assumption on health or environmental effects (lines 27 & 31-32). I am concerned that this section is very short, that it does not describe how environmental justice was evaluated, that it assumes and justifies a finding based on undescribed methods and/or analysis, and uses this finding to apparently dismiss Environmental Justice impacts from the cost-benefits analysis (based on my interpretation of Table 3-26 & Table 3-29).

I would also like to note that lines 28 – 32 in this section were confusing. I took the phrase "no disproportionately high and adverse cumulative health or environmental effects are expected" to mean that no effects are expected because the word "no" followed by "effects are expected" reads as "no effects are expected", but I was able to clarify on a call with NRC staff that this is incorrect and health and environmental effects are expected. I believe it would improve the draft EIS to include an additional line at the end of section 3.16.3 clarifying that health and environmental effects are expected, and either listing them again or pointing the reader to where they can review them elsewhere in the document.

6) Clarification whether all environmental impacts at the facility are included in the draft EIS

After reading an article in The State titled "Secretive defense plant operating in the shadow of atomic fuel factory near Columbia" (see attached), I would like to clarify whether the draft EIS reports all potential environmental impacts from all activities in the geographic locations indicated in Figure 2-2. As a member of the public, I am concerned that the draft EIS document I reviewed is incomplete and may not report potential environmental impacts accurately.

Sincerely,
Jory Fleming



Radioactive pollution leaked through floor of SC nuclear fuel plant

Sammy Fretwell

Westinghouse Nuclear fuel factory southeast of Columbia, SC
Westinghouse Nuclear fuel factory southeast of Columbia, SC Photo courtesy of High Flyer

Radioactive uranium has leaked through the floor at the Westinghouse fuel factory on Bluff Road, contaminating the soil in an area of Richland County with a nearly 35-year history of groundwater pollution from the plant.

The U.S. Nuclear Regulatory Commission says the uranium, a toxic substance used to make nuclear fuel rods, seeped through a 3-inch hole in a concrete floor in part of the factory where an acid is used. The hole extends 6 feet into the ground, according to the NRC. The NRC learned of the leak July 12.

Officials with the S.C. Department of Health and Environmental Control said they have no reason to believe the uranium has trickled off the site or that public water supplies are threatened.

However, the agency said it does not have the results of recent groundwater tests on the Westinghouse property. Those test results will show whether pollution in the soil washed into the area's shallow groundwater, which seeps into creeks in the Congaree River flood plain.

NRC records show uranium pollution reached 4,000 parts per million in the soil beneath the plant. Those levels are 1,300 times higher than the amount of uranium typically found in soil, records show. Soil usually contains about three parts per million of uranium, according to the Health Physics Society, a radiation safety organization.

Tom Clements, an anti-nuclear activist who tracks issues at the Westinghouse plant, said government agencies need to explain how long the contamination went on and how much radiation has been released. The Westinghouse plant is several miles from Congaree National Park, a vast floodplain wetland renowned for its sparkling water and tall trees.

"It's a pretty big concern if you have an unknown quantity of material containing uranium leaching into the groundwater," Clements said.

Elevated levels of uranium in drinking water can increase a person's risk of kidney damage, according to the U.S. Centers for Disease Control and Prevention. Over a lifetime, exposure to uranium also can increase a person's risk of cancer, the agency says.

Roger Hannah, a spokesman for the NRC in Atlanta, said it does not appear the uranium has spread off the site, calling the contamination "very localized." But he said the agency is investigating to learn more about what happened.

The recent uranium leak is the latest in a series of troubles at the plant.

Two years ago, Westinghouse had to shut down part of the plant after uranium built up in an air-pollution device. In 2017, a toxic solution sprayed a worker, forcing him to take decontamination measures. This year, the NRC cited Westinghouse for failing to ensure proper procedures were in place to limit a burst of radiation from occurring.

The company has pledged to do better, bringing in new management.

Westinghouse, which employs about 1,000 workers at the facility, also has had troubles with groundwater pollution at the site for three decades.

High levels of nitrate have been found in groundwater beneath the site since at least 1984, according to DHEC records. Those elevated levels prompted cleanup efforts, but nitrate remains in groundwater. Nitrate is particularly dangerous to infants who drink formula contaminated with the pollutant.

DHEC spokesman Tommy Crosby said the state agency is not concerned the pollution is a threat to public health. The agency said there are no public water supply wells within 2 miles of the Westinghouse plant and no private homes downstream from the plant.

"Based on existing information, there is no threat to the public from this recent release or from historical groundwater contamination at this secured site as there is no exposure risk to the general public," Crosby said in an email this week.

NRC records show the leak occurred in a section of the plant that contains a hydrofluoric acid spiking station. The company found a hole in the floor while making repairs to a liner, according to the NRC. It then notified regulators of a possible "unauthorized discharge into waters of the state which may cause or contribute" to a violation of water-quality standards, NRC records show.

Westinghouse spokeswoman Sarah Cassella said the company has covered the hole in the floor with a metal plate and shut down chemical-processing equipment in the area. The company won't begin using the station where the leak occurred until repairs are completed.

"Additional actions may also be completed once the investigation is complete," Cassella said in an email to The State.

Westinghouse operates one of only a handful of nuclear-fuel factories in the United States. The company makes uranium-based fuel assemblies that are used to fire commercial nuclear reactors. The Westinghouse facility is up for a new federal operating license, but no decision has been made.

Separately, the company was the chief contractor on the failed $9 billion V.C.

Summer nuclear plant expansion, northwest of Columbia, that was abandoned last summer.

This story was originally published July 24, 2018 5:58 PM.

'You guys have gotten me afraid.' Radioactive groundwater found at SC fuel factory

Sammy Fretwell

Nuclear leak stirs unease in Lower Richland community

Lower Richland residents are worried about leaks from the Westinghouse nuclear fuel plant near their homes. At a meeting in August, residents voiced those concerns to federal regulators.

Up Next

After nuclear leak, community around Westinghouse plant calls for environment protections

Lower Richland residents are worried about leaks from the Westinghouse nuclear fuel plant near their homes. At a meeting in August, residents voiced those concerns to federal regulators. By Sammy Fretwell

COLUMBIA, SC

Groundwater at Westinghouse's nuclear fuel factory on Bluff Road is contaminated with unsafe levels of radioactive material from years-old leaks that state and federal regulators only learned about in the past year.

Recent tests found levels of radioactive uranium that exceed safe drinking-water standards at two test wells adjacent to the nuclear fuel-rod plant building southeast of Columbia, the U.S. Nuclear Regulatory Commission said during a community meeting.

Thursday night's meeting was held as part of Westinghouse's application for a new 40-year license from the Nuclear Regulatory Commission to operate the Bluff Road plant.

The plant, located between Interstate 77 and Congaree National Park, employs about 1,000 people. The 550,000-square-foot facility, one of only three of its kind in the country, makes nuclear fuel rods that are used to run commercial atomic power plants across the United States.

The pollution found in the two test wells resulted from leaks in 2008 and 2011 that occurred in a contaminated wastewater line, the NRC and Westinghouse said.

The company and federal officials said the uranium-contaminated groundwater is in the middle of the sprawling industrial plant site and has not trickled onto adjacent land. The pollution is thousands of feet away from the boundary of Westinghouse's property, NRC officials said.

Westinghouse thinks the leaks "are fairly shallow, and they are working to better characterize the extent of that contamination," the NRC's Tom Vukovinsky said.

Westinghouse is working on a plan to clean up the pollution to prevent any spread of the uranium-tainted groundwater. The company is preparing a report for the state Department of Health and Environmental Control, to be given to the agency this year, that is expected to address cleanup plans for the 2008 and 2011 leaks. Previously, Westinghouse told federal regulators it did not plan to clean up the 2011 pollution until it shuts down the factory site in 40 years.

Thursday night's revelation of high uranium levels in two test wells follows news this year about other leaks and spills at the Westinghouse plant, a major employer in the Columbia area since opening in 1969.

The NRC did not learn about the 2011 leak until last year and, only recently, found out about the 2008 leak from the fuel rod plant. Westinghouse did not tell the agency at the time the leaks occurred because that was not required, the company and federal officials have said. The leaks occurred in the same area of

the factory, three years apart.

The 2008 and 20111 leaks are not the only concern.

In July, Westinghouse told state and federal regulators it had discovered that a uranium solution leaked through a hole in the floor in another part of the plant this summer and contaminated the ground.

Unlike the 2008 and 2011 leaks, regulators say they haven't found that the uranium that leaked this summer got through the ground and into the water table below. The company is cleaning up that leak by excavating nine feet of tainted soil, Westinghouse spokeswoman Courtney Boone said.

People living near the plant expressed worries Thursday about the safety of the facility. About 70 people attended Thursday's meeting at a Garners Ferry Road conference center.

Residents are concerned groundwater pollution could affect the private wells from which they draw drinking water. They also worry about the possibility of a nuclear accident.

"In the blink of an eye, an accident could potentially have a major detrimental impact on our community," Hopkins resident Karen Irick said, adding, "You guys have gotten me afraid, really afraid. Every time I turn around, there is something going on over there."

Many residents of Lower Richland — a rural area with a mixture of affluent hunt clubs. and poor and working-class neighborhoods — have said they don't trust Westinghouse, recently forming a citizens group to monitor the company. They complain Westinghouse has not been visible in the community, keeping secret its operations and troubles.

Westinghouse's Boone said the Bluff Road plant is being run properly. She added Westinghouse is working to better inform the community about plant operations.

The S.C. Department of Health and Environmental Control and the Nuclear Regulatory Commission say any polluted groundwater that does escape the Bluff Road site likely will flow toward the Congaree River, instead of the nearby Hopkins area, where many people live.

DHEC tests have not found pollution related to the nuclear site in private drinking water wells nearby.

Federal officials held Thursday's meeting to gather information for an environmental study they are conducting of the nuclear fuel plant. The NRC completed a study of the nuclear fuel plant in June. However, federal officials re-opened that study after learning recently about spills and leaks at the plant.

The study will help the agency determine whether to grant Westinghouse a new 40-year license to operate the facility on Bluff Road.

Critics of the plant say Westinghouse should not get a 40-year operating license because of problems at the site. Some favor a shorter period for the license.

This story was originally published November 9, 2018 6:13 AM.

Bluff Road nuclear fuel factory near Columbia, S.C. It is operated by Westinghouse. Photo courtesy High Flyer

Secretive defense plant operating in the shadow of atomic fuel factory near Columbia

Sammy Fretwell

Westinghouse Electric's nuclear fuel plant on Bluff Road southeast of Columbia
Westinghouse Electric's nuclear fuel plant on Bluff Road southeast of Columbia

In the swampy woodlands of eastern Richland County, a little known manufacturing operation has for years churned out material the federal government depends on to maintain the nation's atomic weapons arsenal.

The operation assembles metal bars at the Westinghouse commercial nuclear fuel plant and ships the rods to a reactor in Tennessee, where they're processed to become radioactive. The radioactive metal bars are then sent back to South Carolina so that tritium — a key ingredient in nuclear bombs — can be removed at the Savannah River Site.

This story is a subscriber exclusive

It's a process that has gained little public attention through the years, but one that lately has sparked questions among a handful of critics following Westinghouse Nuclear's effort to gain a new 40-year federal operating license for its commercial fuel factory on Bluff Road.

Critics say the U.S. Nuclear Regulatory Commission should have analyzed the metal-bar assembly plant in a recent study of how the Westinghouse Nuclear fuel factory might affect the environment if it gains federal approval for the 40-year license.

They say the metal-bar plant has operated in virtual secrecy through the years at the Westinghouse fuel factory, a 550,000-square-foot facility better known as a place where metal rods are made for commercial atomic power plants — not for military uses.

Using a commercial nuclear fuel factory to produce material that also supports the military weapons effort sets a bad example for countries the United States is trying to discourage from developing atomic weapons, critics say.

The local Sierra Club and Savannah River Site Watch, which plans to release a report on the defense-related part of the Westinghouse plant this week, are the primary groups that have expressed worries about the operation. Both are seeking more information about the defense-related work at the Westinghouse commercial nuclear fuel factory.

"This is a kind of hidden, obscure facility and I cannot see how it is regulated," said SRS Watch director Tom Clements, who is tracking the Westinghouse Nuclear effort to gain a new license to operate over the next four decades.

"The public should first be concerned about the nuclear weapons implications of a facility right here in our community. The second thing is that nuclear defense-related activities actually produce hazardous waste that we have no assurance is being regulated properly."

Pamela Greenlaw, a Sierra Club member, recently brought up concerns about the defense-related section of the fuel factory during a quarterly Governor's Nuclear Advisory Council meeting in Columbia.

She called that part of the Westinghouse fuel factory a "stowaway company" that not enough people know about.

A key question is whether waste generated from the metal bar assembly section of Westinghouse has polluted the land or water near the plant.

While the defense-related part of the Westinghouse fuel plant does not generate radioactive waste, it

produces some hazardous waste as it makes metal bars for the national defense effort, according to the company and the National Nuclear Security Administration.

The contaminants include acetone and zirconium, both of which can sicken people who are exposed in sufficient quantities.

“We are not asking for state secrets, we just want to know about pollutants and for them to do the right thing,” Greenlaw said in an interview with The State this week. “How it is being handled by Westinghouse Fuel Fabrication Facility administrators is not forthright.”

Both Westinghouse and the National Nuclear Security Administration downplayed environmental threats from hazardous waste generated at the site, saying the amount of toxic refuse produced at the metal-rod operation is minor.

“The small amount of non-radioactive waste that can be produced, including acetone rags and zirconium alloy metal shavings, is not released to the environment,” the NNSA said in a statement this week.

Still, a top Westinghouse executive concedes the company hasn’t said much publicly about the defense-related metal bar factory in the past because it “was classified information.” That has changed, and Westinghouse is now trying to let people know more about the defense-related work, said Mike Annacone, a vice president for the commercial fuel plant.

Critical days ahead

Questions about the defense-related business have surfaced at a critical time for Westinghouse. The company’s factory on Bluff Road has produced fuel rods for the commercial atomic power industry since 1969.

But its license will expire this decade, and the company is seeking federal permission to keep operating another four decades. The public has until Nov. 19 to comment on the environmental study of operating the plant in the future.

Supporters say the commercial nuclear fuel factory is vital to the Columbia-area economy, employing about 1,100 people, and to the production of atomic energy across the country.

The company says 10 percent of U.S. electricity comes from nuclear fuel manufactured by Westinghouse in Columbia. Without Westinghouse’s fuel rods, it would be harder to run nuclear power plants, supporters say. It is one of only three fuel rod plants of its kind in the country.

Unfortunately for Westinghouse, the company has experienced an array of spills and leaks in recent years that have brought intense scrutiny and criticism for the operation in eastern Richland County. Groundwater is heavily contaminated beneath the site, and nearby property owners and residents worry that it will one day pollute their drinking water wells.

Now, some people are asking about the defense-related mission at the site, and questioning why little has been said about its waste stream.

TPBarDiagram.jpg
TPBars are made at the Westinghouse fuel factory in Columbia, SC

The Nuclear Regulatory Commission’s environmental impact statement said there would be some moderate effects in Richland County from continued operation of the commercial fuel plant, but critics say the statementdid not address the defense-related section of the plant. Federal records indicate that section of the plant began operation about 20 years ago.

In addition to the Sierra Club and SRS Watch, the Congaree Riverkeeper organization says it also would like to know more about the defense-related section of the commercial fuel factory on Bluff Road. The Riverkeeper is interested in how operations on Bluff Road might one day affect the Congaree River and its tributaries.

A company called Westinghouse Government Services, owned by Westinghouse and formerly known as Wesdyne, has a contract with the National Nuclear Security Administration to produce the metal bars, a

Westinghouse fact sheet says.

The work is done in a "standalone manufacturing area" with controlled access on Bluff Road, the fact sheet says. The Westinghouse site is in a remote area of eastern Richland County just a few miles from Congaree National Park.

Regulators at the S.C. Department of Health and Environmental Control say the Westinghouse commercial fuel factory actually manufactures the metal bars in Columbia.

Meanwhile, Richland County recently required the defense-related section of the Westinghouse plant to get a separate business license because it appears to be a separate business, said Zach Cavanaugh, the county's director of business services.

$11,000 metal bars

Regardless of what the facility is called, the National Nuclear Security Administration says the defense-related section of the plant is vital to U.S. security.

Westinghouse's operation produces 1,500 metal rods, known as TPBARs, every year, according to the NNSA. Those rods are valued at about $11,000 apiece, records show. Tritium extracted from the metal bars at SRS is needed to replenish nuclear weapons because tritium decays relatively rapidly.

The operation is considered so important that the country's nuclear defense system would be jeopardized if it did not continue, as is, at the Columbia site, a federal document obtained by SRS Watch shows.

Losing the Columbia operation "would cause a break in production and significantly impact the tritium readiness program's ability to be prepared to provide new tritium, thereby jeopardizing the defense mission and placing the nation's security at severe risk in the event of a national emergency," according to a proposal to continue contracting for the work at the Columbia factory.

Even so, concerns remain.

Clements said having a defense-related section at the Columbia plant is part of a federal effort that mixes production of nuclear fuel for commercial uses with production of nuclear weapons.

That sets a bad example for other countries the U.S. is trying to discourage from developing nuclear weapons materials at commercial power plants, he said. The United States had a policy for more than 50 years of barring commercial reactors from producing ingredients for atomic bombs, but that policy changed in 2003, according to the book "Tritium on Ice."

"The decision to produce these rods in a commercial facility for military purposes should be revisited," Clements said.

Westinghouse says it isn't producing nuclear materials, only the metal bars that go to Tennessee for processing in a nuclear plant.

Annacone, the Westinghouse Nuclear executive, told the governor's nuclear advisory panel last month that the facility does not have radioactive tritium and some of the waste it produces is handled "through our normal waste disposal processes."

Annacone said the metal bar part of the Westinghouse plant produces zirconium scrap, as well as acetone soaked rags. Both are considered hazardous wastes.

Unanswered questions

Westinghouse, the defense-related facility's parent company, has said little through the years about that section of the commercial fuel rod plant. One story in the Free Times, a Columbia alternative weekly, outlined operations at the plant in 2013.

Even with Annacone's assertions last month that Westinghouse could talk more about the defense-related part of the factory, the company referred some specific questions from The State to the Nuclear Regulatory Commission and to fact sheets the company put together.

The NRC said it could not comment because it does not regulate the defense facility.

According to one Westinghouse fact sheet, the bar-production facility does not release "liquid or gaseous" material and its acetone and zirconium wastes are regulated by the S.C. Department of Health and Environmental Control. It says the amount of hazardous waste generated is minor.

Acetone is a colorless, flammable chemical used to make other chemicals, as well plastic, drugs and fibers, and it is used to dissolve other substances, according to the U.S. Centers for Disease Control and Prevention.

People who breathe even moderate amounts of acetone vapors can become dizzy and experience eye troubles. Very high exposure can cause people to pass out, the CDC says. The agency says it has been found at about 40 percent of the nation's federal Superfund sites, which are contaminated areas on a priority list for cleanups.

Zirconium is a soft metal, used to coat nuclear fuel rods, that can affect people who breathe in the material. Short term exposure can irritate people's eyes and skin, according to the New Jersey Department of Health. Zirconium powder, dust or granules are highly flammable and can, in some cases, explode spontaneously.

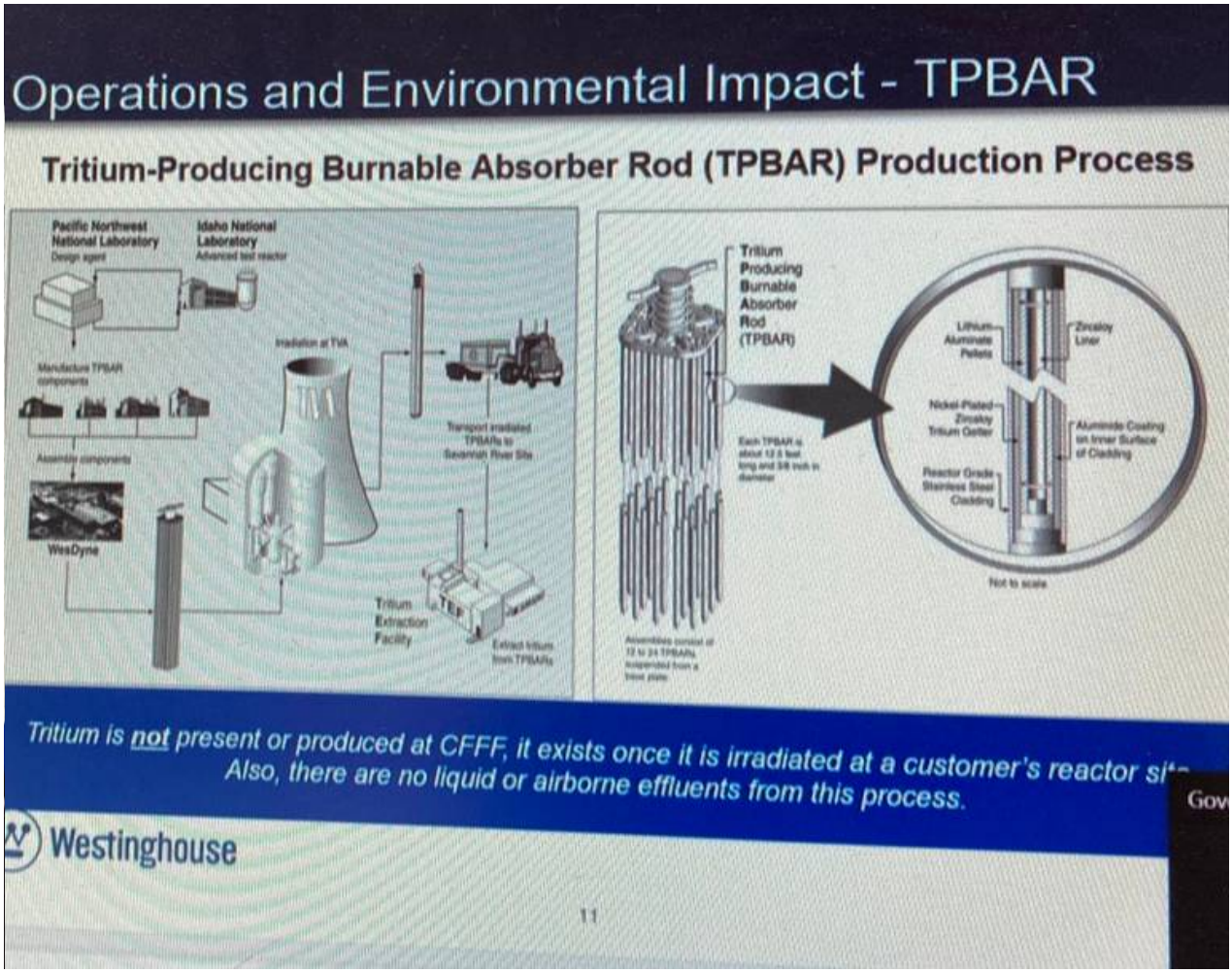
westinghousebluff road
Westinghouse nuclear fuel plant on Bluff Road The State file photo

Westinghouse Nuclear's fact sheets do not provide much detail about lithium, the material inside the metal bars that are shipped to Tennessee to be made radioactive. The bars are inserted into a nuclear reactor at the Watts Bar plant in Tennessee, where they remain for about 18 months.

During their time at the Tennessee plant, the bars become radioactive and the lithium changes to tritium. Tritium is a key component of nuclear weapons. It is the material that gives bombs their explosive force. The Savannah River Site later extracts the tritium once TPBARs arrive there, a process that provides material for atomic weapons.

"From our beginning, when the first fuel components were produced and shipped .... we have created a legacy of quality performance and products," the company says on its website. "Westinghouse is committed to safety, quality and meeting customer needs and expectations as we strive to be the industry's most responsive supplier of flawless, value-added fuel products and services."

This story was originally published November 18, 2021 9:25 AM.


Operations and Environmental Impact - TPBAR
Tritium-Producing Burnable Absorber Rod (TPBAR) Production Process
Pacific Northwest National Laboratory
Design agent
Idaho National Laboratory
Advanced test reactor
Irradiation at TVA
Manufacture TPBAR components
Assemble components
WesDyne
Transport irradiated TPBARs to Savannah River Site
Tritium Extraction Facility
Extract tritium from TPBARs
Tritium Producing Burnable Absorber Rod (TPBAR)
Each TPBAR is about 12 ½ feet long and 3/8 inch in diameter
Lithium-Aluminate Pellets
Zircaloy Liner
Nickel-Plated Zircaloy Tritium Getter
Aluminide Coating on Inner Surface of Cladding
Reactor Grade Stainless Steel Cladding
Not to scale
Assemblies consist of 12 to 24 TPBARs suspended from a base plate
Tritium is not present or produced at CFFF, it exists once it is irradiated at a customer's reactor si
Also, there are no liquid or airborne effluents from this process.
Westinghouse
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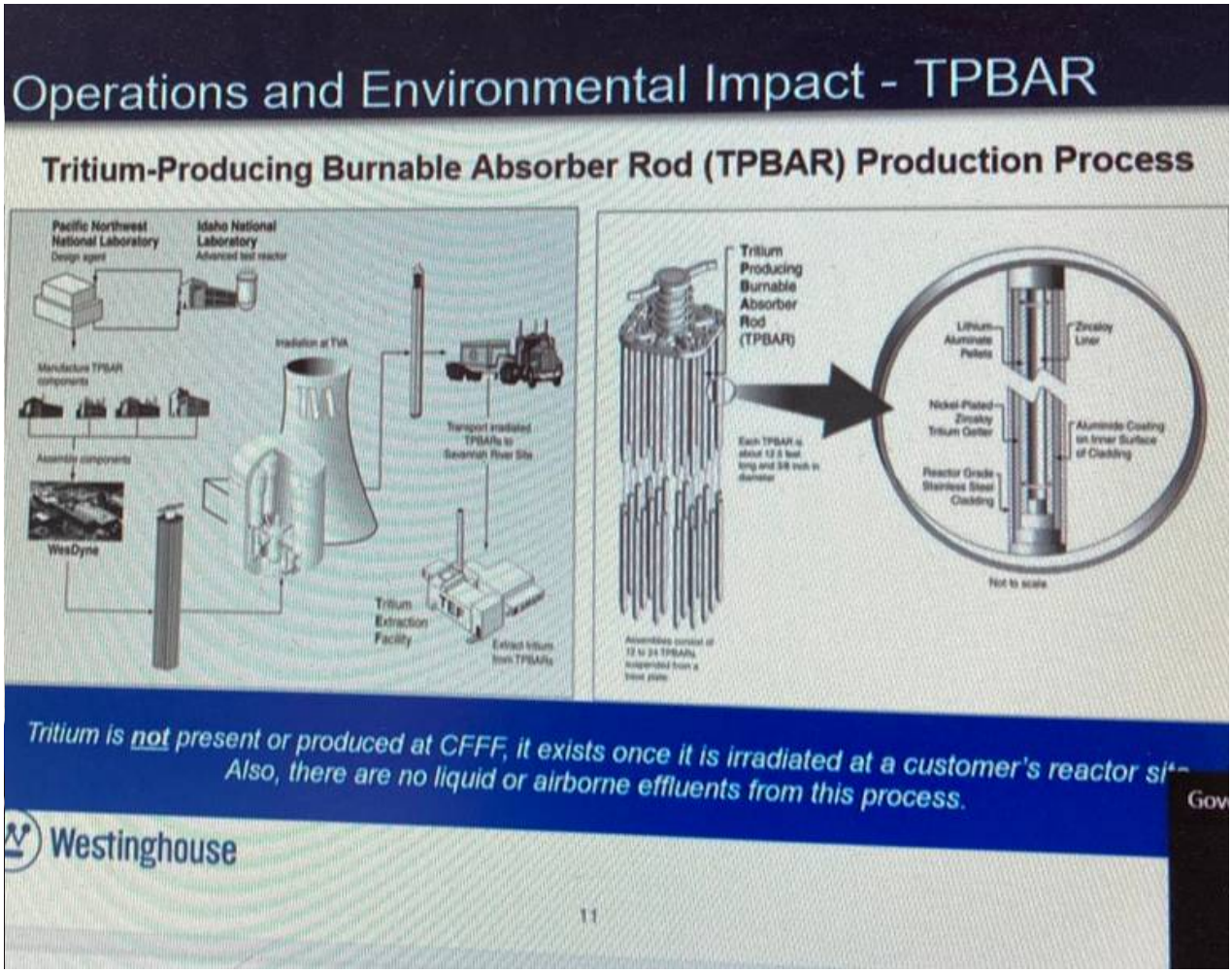
Westinghouse
Columbia Site
5801 Bluff Road



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Westinghouse nuclear fuel plant on Bluff Road The State file photo

Sammy Fretwell has covered the environment beat for The State since 1995. He writes about an array of issues, including wildlife, climate change, energy, state environmental policy, nuclear waste and coastal development. He has won numerous awards, including Journalist of the Year by the S.C. Press Association in 2017. Fretwell is a University of South Carolina graduate who grew up in Anderson County.

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Congaree National Park threatened by nuclear fuel plant, federal document shows

Sammy Fretwell

360 Video: Take in the sights and sounds of Congaree National Park

Experience tall champion trees and scenic swampland in this 360 video of Congaree National Park in South Carolina.

Up Next

Photographing fireflies at Congaree National Park

Experience tall champion trees and scenic swampland in this 360 video of Congaree National Park in South Carolina. By Ashlen Renner

The U.S. Department of the Interior has raised alarms about pollution from a nuclear fuel plant near Columbia, saying it could "have potential impacts" on Congaree National Park as contamination trickles through the ground from the Westinghouse factory.

In a letter made public Friday, the department recommends the plant receive only a 20-year license to continue operating — instead of the 40 years proposed by Westinghouse and recommended by state nuclear advisers — because of environmental problems at the facility.

"Multiple leaks or spills" at the Westinghouse plant, as well as contamination from flooding, are chief worries, according to the seven-page letter.

Extensive groundwater contamination has been found beneath the Westinghouse plant, some of which only has been discovered in recent years, The State has previously reported.

Written to the U.S. Nuclear Regulatory Commission, the interior department letter said an environmental study of the plant's impact on the area does not adequately address many issues — and the fuel plant's potential effect on the national park is a major worry.

"The department is concerned that an existing subsurface contamination plume from the (factory) could have potential impacts to Congaree National Park and the Congaree River as it migrates through a highly interconnected hydrogeologic system within the park," according to the letter from the Interior Department's regional environmental officer, Joyce Stanley.

Stanley's letter, dated Sept. 17, is the first comment from a federal environmental agency that has come to light with concerns about the Westinghouse plant. The Department of Interior oversees the National Park Service, which manages Congaree National Park.

Among other things, the department wants more extensive monitoring for groundwater pollution at the Westinghouse site, the letter said. It also wants to know how radioactive contamination might affect the Congaree River and how floods like the 2015 deluge that swamped Columbia could affect the area near the nuclear fuel plant.

The Westinghouse plant, built more than 50 years ago, makes fuel rods for commercial nuclear power plants. It handles uranium and other radioactive materials, as well as chemicals. It is about four miles up the road from Congaree National Park, a 27,000-acre preserve known for its expansive flood plain, meandering streams and towering, old-growth trees.

Westinghouse wants a license to operate the plant another 40 years, arguing that the facility is safe and improvements are being made after a recent history of problems. Gov. Henry McMaster's Nuclear Advisory Council voted last month to support a 40-year license for the plant, citing improvements by Westinghouse.

But Stanley's letter discourages a long-term license despite a Nuclear Regulatory Commission environmental study that downplayed the impacts of the plant. That environmental study recommended a 40 year license.

The earth's changing climate is expected to bring heavier rainfall at the same time development is expected to increase in eastern Richland County, Stanley wrote.

A 20-year license is preferred "given all of the uncertainties regarding contaminant plume source, transport, and fate, as well as re-evaluation in the face of anticipated development and climate change impacts," her letter said.

What impact the Interior Department letter will have on the NRC's decision on a new license for Westinghouse is unknown. The decision is ultimately up to the nuclear oversight agency. The agency is taking public comments through Nov. 19. A decision on the license is expected next year.

Dave McIntyre, a spokesman for the NRC, said his agency would take the letter into consideration as it decides whether to issue a new license.

"This is similar to some comments we have heard in public meetings and we will certainly review it," he said, adding that Interior Department officials "have certain expertise and credibility. But we do take all comments seriously."

Tom Clements, a nuclear safety advocate who is tracking the Westinghouse license issue, said the Interior Department raises legitimate concerns about pollution from the plant and how that might affect Congaree National Park, as well as the surrounding community.

"This is quite significant," he said. "A federal agency that owns Congaree National Park, what they say can't be brushed under the rug. ''

Congaree National Park, for years the only national park in South Carolina, draws about 100,000 visitors annually. The area was protected in the mid-1970s and became South Carolina's first national park 18 years ago.

The Congaree River and its tributaries flow past or through the park below the nuclear plant. The park is widely known for its extensive and unspoiled forested flood plain.

Concerns by the Interior Department follow a series of troubles at the Westinghouse plant in recent years and the discovery of groundwater pollution government officials had not been told about.

Since 2016, the plant has drawn NRC scrutiny over a buildup of radioactive uranium in an air pollution control device, leaking shipping containers and a leak of uranium through a hole in the plant's floor, among other things.

At the same time, NRC officials said in 2018 that groundwater was polluted with unsafe levels of radioactive material from leaks that occurred years ago, but only recently revealed to state and federal regulators.

Many people who live near the plant have questioned whether Westinghouse could pollute their well water or cause other environmental problems.

But Westinghouse officials have said groundwater is not flowing toward their wells.. The company has an agreement with the S.C. Department of Health and Environmental Control to assess the contamination and take action when warranted.

McMaster's nuclear committee, composed of political appointees, said last month it is satisfied with Westinghouse's efforts, and its chairman argued that power plants need the product Westinghouse produces. The company's role in the production of nuclear power is significant because it provides the fuel rods that make many atomic energy plants run.

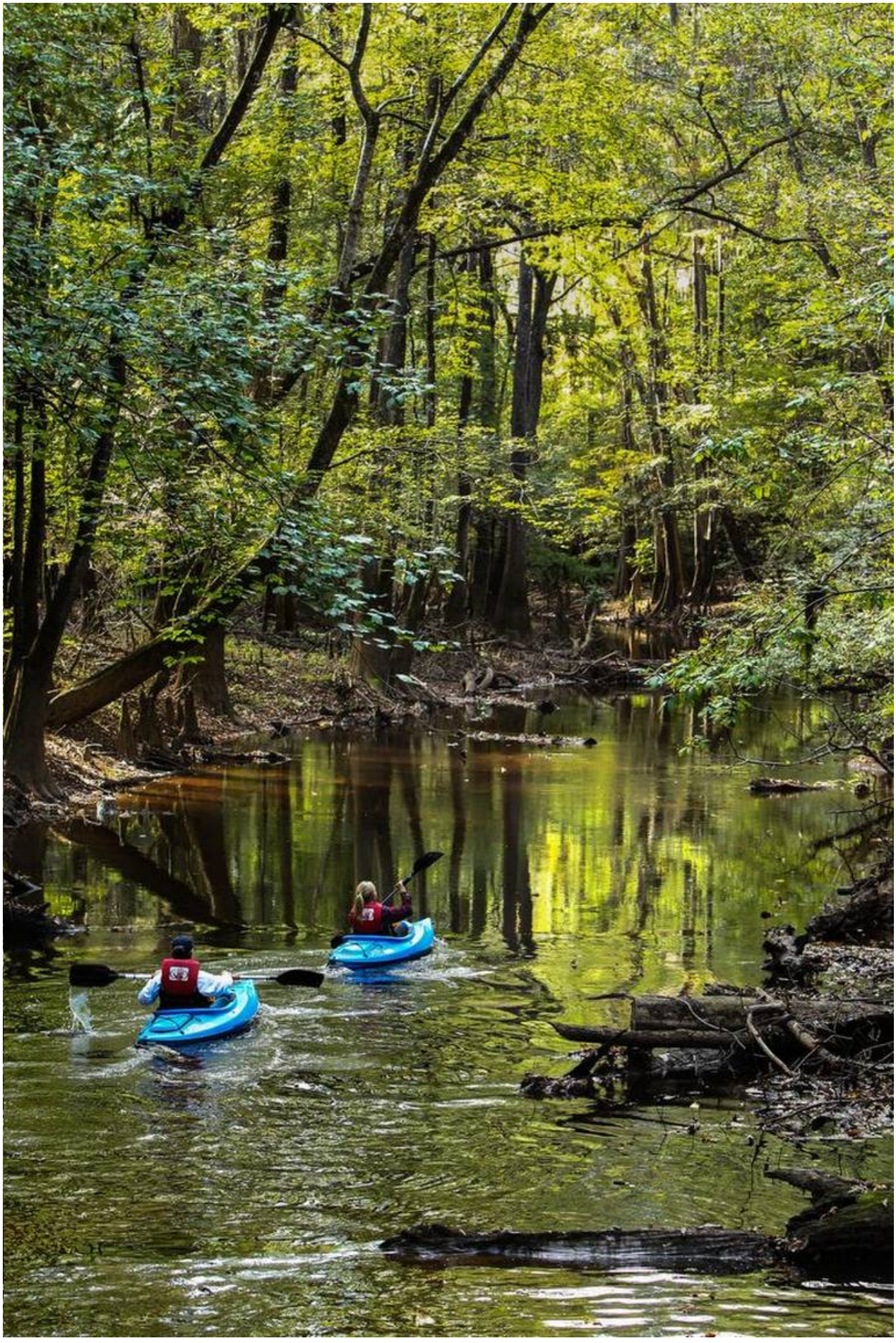
Locally, the plant also is a major employer, with more than 1,000 workers. It is located between the national park and Interstate 77, east of the Congaree River.

A Westinghouse spokeswoman did not respond directly to the Interior Department concerns, but said the

NRC will examine the comments.

"The regulatory process allows for any public comment, and the letter from the Department of Interior was submitted to the NRC through the public comment period," spokeswoman Karen Gay said in an email Friday afternoon.. "The NRC has a robust process that we fully support."

This story was originally published November 5, 2021 4:07 PM.



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Congaree National Park, southeast of Columbia, is filled with blackwater streams, tall trees and wild animals. It is popular with kayakers and hikers. Tracy Glantz File photo/The State

Sammy Fretwell has covered the environment beat for The State since 1995. He writes about an array of issues, including wildlife, climate change, energy, state environmental policy, nuclear waste and coastal development. He has won numerous awards, including Journalist of the Year by the S.C. Press Association in 2017. Fretwell is a University of South Carolina graduate who grew up in Anderson County. Reach him at 803 771 8537. Support my work with a digital subscription